

REMARKS

Applicants request reconsideration of the application as amended. Claims 37-52 are pending. Claims 37, 42, 44, 46 and 51 are amended for form and clarity. Claims 1-36 previously were canceled.

Claim Rejections - 35 U.S.C. §112, first paragraph - enablement

Claims 37 to 52 were rejected under 35 U.S.C. §112, first paragraph, for lack of enablement. The Examiner points to the following sentences in the specification at page 5, lines 5 to 12: "The precise process of the reactive formation in the flame is unclear, but it can be assumed in practice that the silicon or germanium tetrachloride reacts by forming very small silicon dioxide or germanium dioxide particles, and the liquid particles react by forming erbium and aluminum oxide. The formed particles react either simultaneously or separately with the above-mentioned reactions and combine with each other to form homogeneous multicomponent glass." Because the Applicants "speculate" as to the exact mechanism of the reactions within the flame, the Examiner contends that the application does not enable one skilled in the art to make two glass particles which combine to make multicomponent glass particles.

Applicants respectfully disagree with the Examiner's characterization and conclusion. It is not a requirement of patentability that an inventor correctly set forth, or even know, how or why an invention works. *Fromson v. Advance Offset Plate, Inc.*, 219 USPQ 1137, 720 F.2d 1565, 1570, 1571 (Fed. Cir. 1983)("[A]n inventor need not comprehend the scientific principles on which the practical effectiveness of his invention rests."). In *Fromson*, product and process claims concerned photographic printing plates with certain surface coatings formed thereon. In the claims, the interaction between anodized aluminum and alkali metal silicate was characterized as a "reaction," and *Fromson* had speculated on what the product of that reaction might be. Whether the interaction of the two materials was a "reaction" or something else was immaterial, since *Fromson* had focused on the fact of the interaction and the production of a new layer with particular properties on a photographic printing plate.

Here, the claimed methods form particularly homogenous multicomponent glass particles that are sprayed to a target. Similar to Fromson, whether Applicants have speculated correctly on the precise reactions that occur, Applicants have set out clearly the method steps that may be carried out by skilled persons to achieve the desired multicomponent glass particles.

Nevertheless, to obviate the rejection, Applicants have amended the independent claims to delete the claim terms that the Examiner believed lacked enabling disclosure support in the specification. For example, claim 37 is amended to delete the phrases: “such that the first glass component reacts in the flame to form first oxide particles”, “so as to form second oxide particles in the flame” and “wherein the first oxide particles and the second oxide particles combine with each other in the flame so as to form”. Claim 37 is further amended to include the phrase: “guiding multicomponent glass particles comprising the rare earth metal formed in the flame onto the target.” Support for this phrase is found in the specification at page 5, lines 12-15: “The produced multicomponent glass particles are guided by means of the flame 9 onto the surface of a target 10, which in the manufacture of an active fibre is a mandrel, whereby the multicomponent glass particles form a porous glass surface on the mandrel surface.”

The Examiner acknowledged that the specification disclosure does enable skilled person to make multicomponent glass particles and spray them to a target. With the amendments, the claims recite method steps within the bounds the Examiner has deemed enabled. Accordingly, the claims should be allowed.

Claim Rejections - 35 U.S.C. §112, first paragraph – written description

Claims 37 to 43 were rejected under 35 U.S.C. §112, first paragraph, for lack of written description. The Examiner states that the claims do not have specification support for the limitation of introducing a second glass component through a liquid tube separate from the gas tube through the nozzle. Applicants disagree with the Examiner’s characterization of the meaning of “separate”, since Applicants have shown multiple

coaxially aligned tubes that exit from a common nozzle in Figure 1. The various tubes define volumes through which the liquid and gas components are guided in separate streams before being emitted from the nozzle into the flame.

Nevertheless, to obviate the rejection, Applicants have amended claims 37 and 42 for greater clarity. Applicants have deleted the phrase "separate from the gas tube" from claim 37. Applicants have made claims 37 and 42 more clear by specifying that (a) the first glass component is introduced through a gas tube and through the nozzle; and (b) the second glass component is introduced through a liquid tube and through the nozzle. Support for these amendments is found in the specification at page 5, line 34 to page 6, line 11, in which operation of the nozzle is described with reference to Figure 2. The claims as amended are fully supported and should be allowed.

Conclusion

In view of the above claim amendments and remarks, Applicants believe that claims 37 to 52 should be allowed.

Applicants believe no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 22-0185, under Order No. 20386-00294-US from which the undersigned is authorized to draw.

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Respectfully submitted,



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